Arthur F. Shenkin
[redacted]

DATE: 6/30/11

TO: TRAVIS MORRIS

COMPANY: _____

FAX Number: 970-241-2358

TOTAL PAGES, including cover 19

GRAND ENVIRONMENTAL SERVICES

Working with the Environment

November 9, 2004

Mr. Tony C. Curtis, Chief, Frisco Regulatory Office
301 West Main Street, Suite 202
P.O. Box 607
Frisco, CO 80443-0607

Wetland Reconnaissance of Jordan Road Pole Line Clearing at East Inlet, Grand Lake, CO

Dear Tony,

We are pleased to present results of our wetland reconnaissance of the Jordan Road pole line clearing at East Inlet, Grand Lake, Colorado on behalf of Mr. Arthur Shenkin. Our task is to clarify the presence of wetlands in relation to proposed improvements to a footpath in this project area and how such wetlands might affect project permitting. Project coordinates and study locations are included in Figures 1and 2, and a summary of wetland information in Tables 1 and 2. Attached Data Forms follow US Army Corps of Engineers (USACE) standard protocol. In summary:

A) We followed the pole line south of the footbridge over East Inlet Creek and performed two wetland-determinations. Although late season conditions preclude detailed analysis, both plots key out as jurisdictional wetland. The vegetative community suggests most of the Jordan Road pole line easement between the footbridge and the Orr property is wetland.

B) The second plot keys out as a "fen," a peat-forming wetland of special conservation value. We understand that several USACE Nationwide Permits (NWP) are revoked for project areas with fens including those we typically use for trails: NWP 14 (Linear Transportation Crossings), NWP 18 (Minor Discharges), and NWP 42 (Recreational Facilities).

C) The identified wetlands are part of a complex mosaic of creek, riparian wetlands, fen and willow carr, very old beaver ponds, and forested wetlands extending eastward into Rocky Mountain National Park. Further enhancing conservation value here is potential habitat for State-Listed osprey, otter, and boreal toad, Federally Listed Canada lynx and bald eagle, as well as migratory songbirds and waterfowl, beaver, moose, elk, deer, bear, and trout.

D) The identified wetland complex is in part "perched" above the creek and lake shoreline; for this reason we recommend special care be taken that any trail-building or other activity not disturb what is likely a delicate hydraulic balance along the Jordan Road pole line.

We look forward to confirming these wetland determinations with you as soon as practicable next Spring, probably late May to early June.

Sincerely,

Geoffrey S. Elliott
Principal Earth Scientist

CC: Peter Houtsma, Holland and Hart
Nancy Stuart, Grand County Planning and Zoning
Jim Sanborn, Rocky Mountain National Park
Kirk Oldham, Colorado Division of Wildlife

935 Mountain Avenue, P.O. Box 857, Grand Lake, CO 80447-0857
GElliott@RkyMtnHi.com (970) 627-5464

Wetland Reconnaissance of Jordan Road Pole Line
East Inlet of Grand Lake, CO

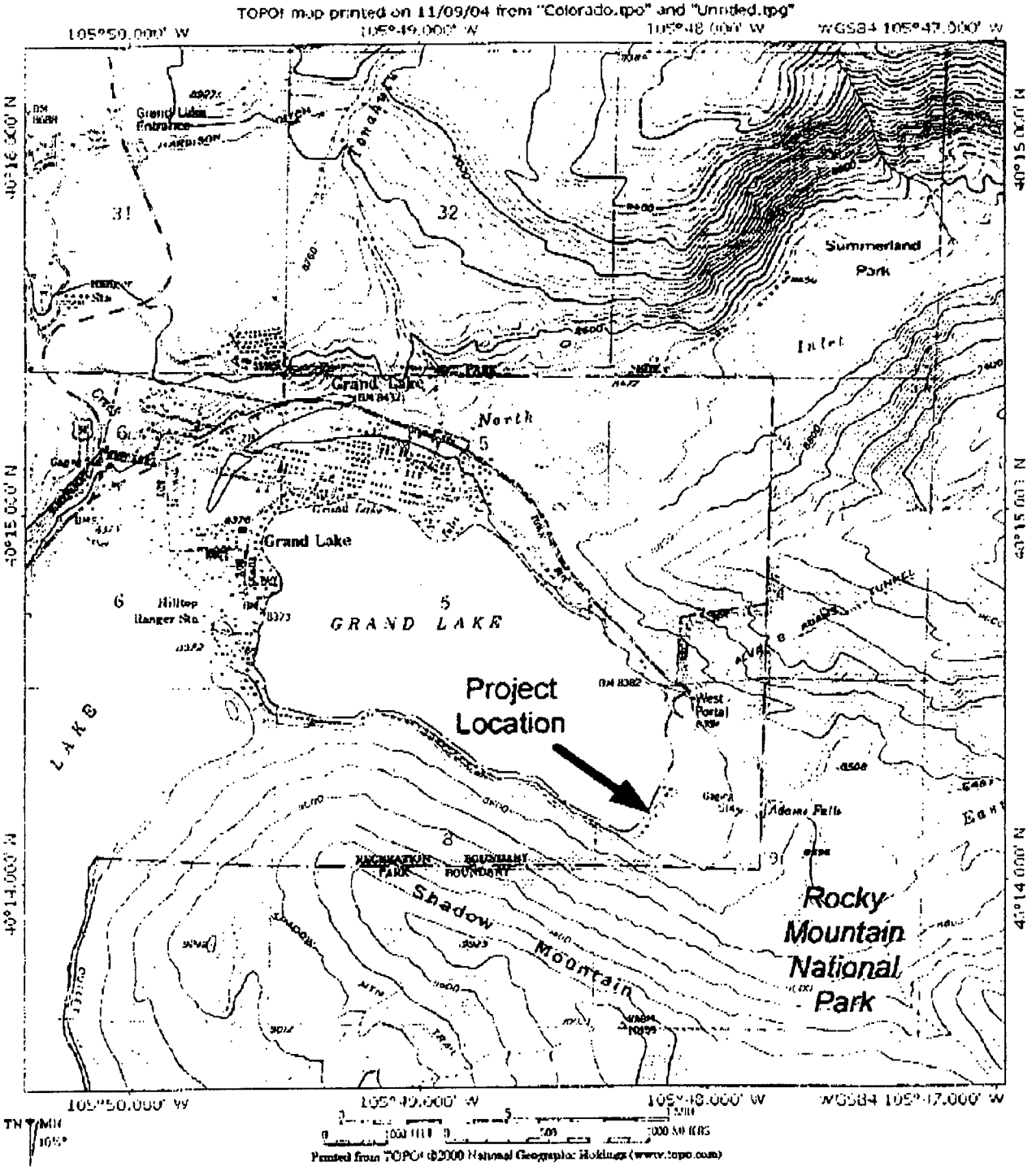

Figure 1: Project Location Map. This wetland reconnaissance was performed along the unimproved Jordan Road right-of-way south of East Inlet Creek on Grand Lake in the NW ¼ of Section 9, Township 3N Range 75W. The area includes a row of shoreline houses backing up to a wetland complex extending into Rocky Mountain National Park. Access from the Town of Grand Lake is via West Portal Road past the Adams Tunnel and Boat Ramp, then SW along the improved portion of Jordan Road and across the 48-inch wide foot bridge to the project area.

Grand Environmental Services
November 9, 2004

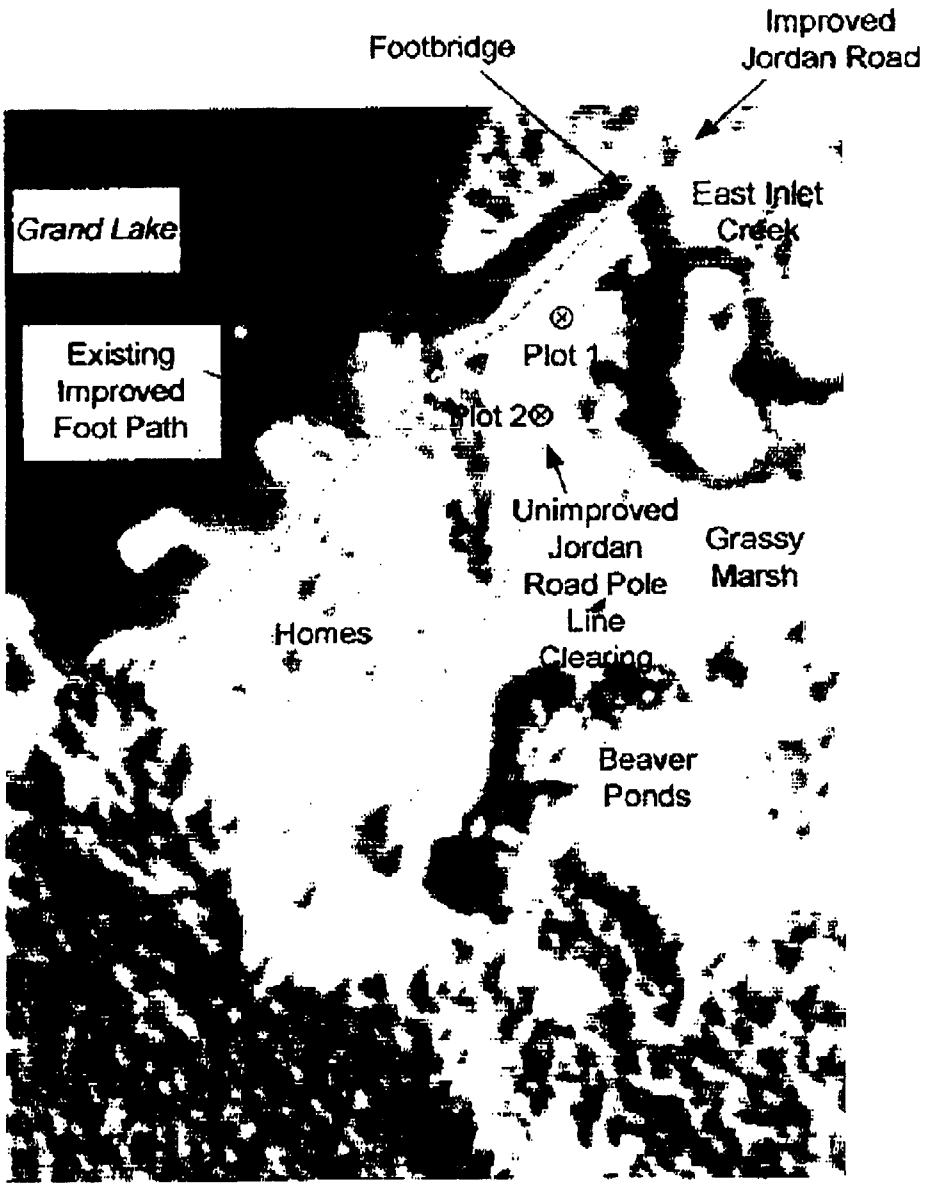

Figure 2: Aerial Photo with Project Area. The project area is the pole-line clearing along the unimproved Jordan Road right-of-way between the shoreline homes and adjacent wetland complex. Existing homeowner access is along an improved shoreline footpath. More detail for Plots 1 and 2 follow in tables and data forms. Photo from Terraserver-USA.com; scale here ~ 1 inch = 200 feet.

Table 1: Habitats In and Adjacent to the Project Area, with Wetland Determination.

Habitat and Wetland Determination Plot Number[1]	USFWS Designation[2]	HGM Designation[3]	Wetland Vegetation?	Wetland Hydrology?	Wetland Soils?	USACE Jurisdictional Wetlands?[4]
1. Grassy Marsh on Low Terrace (Plot 1)	Palustrine Emergent Persistent	Riverine Fringe 1B High Order, Developed Floodplain with Overbank Flows in Wetland	Yes	Yes	Yes	Yes*
2. Grassy Marsh with Willows (Plot 2)	Palustrine Emergent Persistent	Slope 2b Low gradient (0-4%) Organic Soil	Yes	Yes	Yes	Yes*

[1] See Accompanying Data Forms

[2] US Fish and Wildlife Service designation following Cowardin and others, 1979 (USFWS 1979)

[3] Informal nomenclature from Summit Wetland Assessment Method, draft dated 6/23/99 (USACE 1999)

[4] Jurisdictional wetlands according to the US Army Corps of Engineers wetland delineation manual (USACE 1987)

* Determination unconfirmed by US Army Corps of Engineers (USACE) due to late season conditions. To be confirmed by the USACE in Spring 2005.

Table 2: Qualitative Functional-Values Assessment for Identified Wetland Habitats using Hydrogeomorphic Methodology (HGM) (Adapted from USACE 1999)

Wetland Functional Value[1]		
Habitat and Plot #	**Grassy Marsh on Terrace (Plot 1)**	**Grassy Marsh with Willow (Plot 2)**
A) Dynamic Water Storage	High	High
B) Flood-flow Attenuation	Moderate	High
C) Product Export/ Aquatic Food Chain Support	High	High
D) Nutrient and Pollutant Removal/Sediment Retention	Moderate	High
E) Shoreline Stabilization/Sediment Control	High	High
F) Wildlife Habitat [2,3]	High	High
G) State Listed/CNHP Species Habitat [2,3]	Moderate-High	Moderate-High
H) Federal Listed Species Habitat [2,3]	Low-Moderate	Low-Moderate

[1] Summaries presented here; detailed analysis tables available upon request.
[2] CDOW 2003: Wildlife Species Activity Distribution Maps (District 483). Colorado Division of Wildlife.
[3] CDOW 1998: Grand County Wildlife Matrix System. Colorado Division of Wildlife.

Data Form for Routine Wetland Determination
Modified from 1987 USACE Wetlands Delineation Manual

Project Information

Project Name and Location:	Jordan Road Pole Line Wetland Reconnaissance, East Inlet Grand Lake, CO
Applicant/Owner:	Arthur Shenkin and Neighbors
Investigator:	G.S. Elliott and C.J. Schott, Grand Environmental Services, Grand Lake, CO
Date and Conditions:	November 5, 2004, Typical fall day with clear sky and slight breeze
Community Identification:	Grassy Marsh on Low Terrace
Normal Conditions?	No, drought year and late season conditions
Atypical Situation	No
Potential Problem Area	No

Vegetation

Dominant Plant Species	Stratum	Indicator	Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):
Marsh Reedgrass – *Calamagrostis canadensis*	Herb	OBL	
Beaked Sedge – *Carex rostrata*	Herb	OBL	
Non-Dominant Plant Species			
Mountain willow – *Salix monticola*	Shrub	OBL	100%
Large-Leaf Avens – *Geum macrophyllum*	Herb	OBL	
Ticklegrass? – *Agrostis scabra*	Herb	FAC	

Remarks: Plot situated approximately 75 ft. south of bridge (48 in wide) over East Inlet waterway in point bar floodplain. Blue Spruce and Lodgepole Pine adjacent to site. Three Mergansers and 2 Mallards observed on lake. Abundant wildlife sign and close to Rocky Mountain National Park.

Hydrology

Recorded Data (describe in remarks)		Field Observations	
Stream, lake, or tide gauge?	Yes	Depth of surface water (inches)	None
Aerial photos?	Yes	Depth to free water in pit (inches)	None
Other?	No	Depth to saturated soil (inches)	0
Recorded data available?	?	Other?	No
Wetland Hydrology Indicators:			
Primary Indicators:		**Secondary Indicators (need 2 or more):**	
Inundated	No	Oxidized root channels in upper 12 inches	No*
Saturated in upper 12 inches	Yes	Water-stained leaves	No*
Water marks	No	Local survey data	Not tested
Drift lines	No	FAC-neutral test	Not tested

Sediment deposits	No*	Other (explain)
Drainage patterns	Yes	

Remarks: * Late season conditions made some observations difficult. Plot is on perched point bar, first terrace above East Inlet Creek floodplain, could be flooded by very high creek flows (50-500-year events), heavily vegetated, with creek on both east and west sidest. Hummocky ground with drainage ditch occurring next to plot. Creek banks have been reinforced with small boulder revetment.

Soils

Map Unit Name and Source:	Consistent with Cumulic Crayaquolls
Drainage Class:	Poorly drained soils
Confirm Map Unit?	Not mapped, but consistent with Cumulic Crayaquolls

Depth (inches)	Horizon	Soil Classification (ASTM)	Matrix Color (Munsell moist)	Mottle Colors (Munsell moist)	Mottle Abundance/ Contrast	Texture, etc.
0-+1	O					Leaves and twigs
0-10	A	PT	10YR 3/1	None		Clay Loam w/ roots and abundant organic material
10-18	B	PT	10YR 3/1	None		Clay w/ roots and abundant organic material

Hydric Soil Indicators:

Histosol?	No?	Concretions?	No
Histic epipedon?	No?	High organic content in surface layer in sandy soils?	No?
Sulphidic odor?	Yes	Organic streaking in sandy soils?	No
Aquic moisture regime?	Not Tested	Listed on local hydric soils lists?	?
Reducing conditions?	Not Tested	Listed on National Hydric Soils Lists?	?
Gleyed or low-chroma colors?	Yes	Other (explain in remarks)?	

Remarks: Soil saturated throughout with high organic content and prevalent sulfdic odor.

Wetland Determination

Hydrophytic Vegetation Present?	Yes	Is this sampling point within a wetland?
Wetland Hydrology Present?	Yes	
Hydric Soils Present?	Yes	Yes

Remarks: Determination unconfirmed by US Army Corps of Engineers (USACE) due to late season conditions. To be confirmed by the USACE in Spring 2005.

Data Form for Routine Wetland Determination
Modified from 1987 USACE Wetlands Delineation Manual

Project Information

Project Name and Location:	Jordan Road Pole Line Wetland Reconnaissance, East Inlet Grand Lake, CO
Applicant/Owner:	Arthur Shenkin and Neighbors
Investigator:	G.S. Elliott and C.J. Schott, Grand Environmental Services, Grand Lake, CO
Date and Conditions:	November 5, 2004, Typical fall day with clear sky and slight breeze
Community Identification:	Grassy Marsh with Willow
Normal Conditions?	No, drought year and late season conditions
Atypical Situation	No
Potential Problem Area	No

Vegetation

Dominant Plant Species	**Stratum**	**Indicator**	**Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):**
Marsh Reedgrass – *Calamagrostis canadensis*	Herb	OBL	
Beaked Sedge – *Carex rostrata*	Herb	OBL	
Sphagnum moss layer	?	?	
Non-Dominant Plant Species			
Mountain willow – *Salix monticola*	Shrub	OBL	≥66%
Large-Leaf Avens – *Geum macrophyllum*	Herb	OBL	
Ticklegrass? – *Agrostis scabra*	Herb	FAC	
Western Dock – *Rumex aquaticus*	Herb	OBL	

Remarks: Plot situated behind first house roughly 100 ft. from boardwalk, and approximately 30 ft. before first pole beyond bridge. Blue Spruce and Lodgepole Pine occur adjacent to site. Linear opening along pole line flanked by willows suggests shrubby vegetation may have been removed from this area. Plentiful elk, moose, and deer sign, and small mammal burrowing in proximity to active beaver dam complex. Extremely high quality wildlife habitat.

Hydrology

Recorded Data (describe in remarks)		**Field Observations**	
Stream, lake, or tide gauge?	Yes	Depth of surface water (inches)	None
Aerial photos?	Yes	Depth to free water in pit (inches)	None
Other?	No	Depth to saturated soil (inches)	None
Recorded data available?	?	Other?	No
Wetland Hydrology Indicators:			
Primary Indicators:		**Secondary Indicators (need 2 or more):**	
Inundated	No	Oxidized root channels in upper 12 inches	No*
Saturated in upper 12 inches	No	Water-stained leaves	No*
Water marks	No	Local survey data	Not tested

Drift lines	No	FAC-neutral test	Not tested
Sediment deposits	No*	Other (explain)	
Drainage patterns	Yes		
Remarks: *Late season conditions made observation of some indicators difficult. Plot is situated between perched beaver dam complex on east and Grand Lake on west, and is topographically higher than Plot 1, suggesting this is a slope wetland. Hummocky ground + drainage ditch next to plot. Shallow groundwater.			

Soils

Map Unit Name and Source:	Not Consistent with Cumulic Crayquolls
Drainage Class:	Poorly drained soils
Confirm Map Unit?	Not mapped by SCC

Depth (inches)	Horizon	Soil Classification (ASTM)	Matrix Color (Munsell moist)	Mottle Colors (Munsell moist)	Mottle Abundance/ Contrast	Texture, etc.
0-+1	O1					Leaves and twigs
0-18	O2	Pt	10YR 2/2	None		Peaty clay w/ abundant roots and organic material
18-20	B	CL	10YR 3/1	10YR 3/1	Faint and diffuse	Clay w/ abundant roots and organic material

Hydric Soil Indicators:

Histosol?	Yes?	Concretions?	No
Histic epipedon?	No?	High organic content in surface layer in sandy soils?	No?
Sulphidic odor?	No	Organic streaking in sandy soils?	No
Aquic moisture regime?	Not Tested	Listed on local hydric soils lists?	?
Reducing conditions?	Not Tested	Listed on National Hydric Soils Lists?	?
Gleyed or low-chroma colors?	Yes	Other (explain in remarks)?	
Remarks: B-Horizon occurs at 18in, which includes oxidized root channels. Soil high in organic content and sulfuric odor. *Histosol/fen – needs confirmation.			

Wetland Determination

Hydrophytic Vegetation Present?	Yes	Is this sampling point within a wetland?
Wetland Hydrology Present?	Yes*	Yes
Hydric Soils Present?	Yes	
Remarks: Plot attributes are consistent with a fen. *Determination unconfirmed by US Army Corps of Engineers (USACE) due to late season conditions. To be confirmed by the USACE in Spring 2005.		

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814-4794

REPLY TO
ATTENTION OF

February 11, 1991

Regulatory Section

Mr. Paul McIver
Public Outreach Coordinator
Environmental Protection Agency, 8WM-SP
999 Eighteenth Street, Suite 500
Denver, Colorado 80202-2405

Dear Mr. McIver:

I am responding to your undated letter received in this office on January 22, 1991. Your letter concerns the Grand Lake Association's (GLA) adoption of wetlands adjacent to Grand Lake in the vicinity of East Inlet in Grand County, Colorado.

The GLA has expressed their concern for the preservation and integrity of these wetlands through the Adopt-A-Wetland Program sponsored by the Environmental Protection Agency (EPA). We acknowledge the GLA's concerns and fully intend to provide them with appropriate opportunities to express their concerns and opinions regarding this proposal should a Department of the Army permit application be submitted.

Section 404 of the Clean Water Act and the EPA's Section 404(b)(1) Guidelines in particular require the Corps of Engineers to evaluate alternatives for non-water dependent activities proposed for special aquatic sites, i.e., wetlands, which avoid or minimize the anticipated adverse impacts. If, through the preparation of our environmental assessment, we determine that practicable alternatives which avoid impacts to wetlands and which satisfy the basic project purpose are available, we will not issue a permit. If we determine that practicable alternatives are not available, but that the proposal is determined to be contrary to the public interest, we will not issue a permit. However, on the other hand, if we determine that practicable alternatives which avoid wetland impacts are not available and the proposal is not contrary to the public interest, we would issue a permit for the least-damaging practicable alternative.

We met on-site with the proponent on October 18, 1990 and explained the requirements of our regulatory program. The proponent assured us at that time that he would not proceed with any earth-disturbing activities associated with the proposed road until he had secured the necessary permit(s).

I trust this response adequately addresses your request. Until we receive a permit application, we can only speculate on the proposal's impacts or on any alternatives we may consider. At that time, we will be in a better position to respond in greater detail. Should you need further information, please contact Gary Davis of this office at telephone number 243-1199.

Sincerely,

Grady L. McNure
Chief, Western Colorado Regulatory
Office
402 Rood Avenue, Room 142
Grand Junction, Colorado 81501-2563

Copies Furnished:
Grand Lake Association, c/o Mr. Arthur F. Shenkin,
3251 Krameria Street, Denver, Colorado 80222
Mr. James A. Bianco, [redacted]